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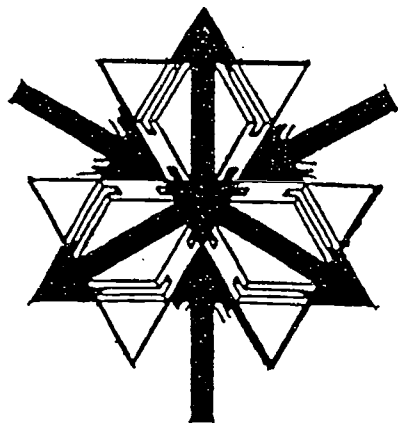
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ABSTRACT

This monograph presents abstracts of 32 papers on the development of general versus specific abilities and their relationship to diversity in gifted and talented students. Sample topics include: creative development at the college level; cultural and linguistic differences in gifted children; Project High Hopes, a program for gifted students with special needs in upper elementary grades; a model for analyzing underachievement in terms of the peer society; preservice teachers' perceptions of the label "gifted-talented-creative"; long-term effects of educational enrichment during infancy; gifted students in restructured middle schools; cultural differences and young gifted children; misbeliefs about intelligence among psychologists, teachers, school administrators, and parents; narrative language differences between gifted/learning disabled (LD) and nonLD/gifted adolescents; active learning and young gifted children; lifespan achievement of gifted women of color; enhancing gendered interpersonal abilities through drama and theater; problem solving in multiple intelligences with Native American and Hispanic children; advanced development in the social domain among gifted girls; an analysis of the early years of the Brontes at Haworth; creativity and race; differences between gifted teachers', regular classroom teachers', and undergraduate education majors' expressed value of empowered behavior for gifted children and children in general; backroom decision making in gifted education; career development of talented teenage musicians; artistic talent and creativity; the relationship of societal competence to parental expectation and individual potential; comparison of inductive and deductive methods of teaching writing in an inner-city school; gifted education in South Africa; and psychosocial diversity. (DB)



The Fourth Annual
Esther Katz Rosen Symposium
on the
Psychological Development of
Gifted Children

Developing General vs. Specific Abilities
and Their
Relationship to Diversity

Abstracts of Selected Papers

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DEVELOPING CREATIVE ABILITIES AT THE COLLEGE LEVEL

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Studies on the extent that creativity has being nurtured by college teachers are rare. The purpose of the research was to investigate the extent that different aspects related to creativity have been fostered by college teachers.

Two hundred thirty-three students from two colleges, one ranked as one of the best in Brazil (College A) and another ranked low among Brazilian colleges (College B) participated in the study. The sample was requested to answer an instrument constructed by the author to investigate the students' perception of the degree that different aspects related to creativity have been fostered on the part of their college teachers. Examples of items from this instrument, which were answered on a five point scale: College teachers in general stimulate students to make questions in relation to the topics studied; they give time to students to think and to develop new ideas; they provide conditions for the students to know divergent points of view in relation to the topics under investigation; they make challenging questions in class; they stimulate the students' independence; they provide an environment of respect to the students' new ideas. This instrument was previously validated by the author in a study with 210 college students.

Students from College A, comparing with those from College B, rated their teachers as providing significantly more adequate conditions to the nurturing of creativity. It was also found that students from the first semesters, comparing with those from the last ones, evaluated their teachers as nurturing significantly more different aspects related to creativity. Our results point to some characteristics of the learning situation that may contribute to the promotion of the creative abilities. These characteristics should be implemented in the elementary, secondary and college levels, in order to prepared students to the creative productivity that is necessary in all societies.

CULTURAL AND LINGUISTIC DIFFERENCES IN GIFTED CHILDREN

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Researchers have verified that at-risk students coming from culturally and linguistically diverse backgrounds experience many problems in the mainstream educational system. This is evident in the over-representation of culturally/linguistically (C/LD) different students in special or remedial programs, higher drop-out and retention rates, as well as lower scores on academic achievement and intelligence tests. These differences have been attributed to a mis-match between the cultural and/or linguistic background of these students and the expectations of the schools (Damico & Hamayan, 1992). Little is known about the impact that cultural and linguistic differences have on the academic performance of gifted students.

It is imperative that professionals are able to **identify** gifted C/LD students who are experiencing difficulties due to cultural and/or linguistic differences. Many researchers have studied the effects of culture and literacy (Chisholm, 1981; Heath, 1980; Scribner and Cole, 1981; Westby, 1985). Westby (1985) has identified **oral-literate** differences in language use, topic and language acquisition, with the more literate style being most valued within the school environments. Those cultures that can use a decontextualized/literate language (i.e., communicative use that is not dependent upon the immediate environment of the speaker and listener) or a language that is used for reflecting, reasoning, and planning exhibit greater ease in acquiring and using literacy than do those cultures that rely almost exclusively on a here and now use of language (Westby, 1985).

A review of the literature will be presented relative to the scope of this presentation. It is the purpose of this presentation to: 1) identify oral-literate differences of language use and acquisition of gifted C/LD children, 2) propose that researchers study cultural and linguistic differences and how they affect the academic performance of gifted children, and 3) highlight the need for the involvement of language specialists in the screening and evaluation of children referred for gifted services.

**PROJECT HIGH HOPES:
DEVELOPING TALENT IN GIFTED STUDENTS WITH SPECIAL NEEDS**

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An almost totally neglected population of gifted learners are high ability students with special needs. This situation exists for several reasons. First, traditional methods of identification are biased against students with learning, behavior, attentional difficulties or physical handicaps. Second, even if gifted potential is noted in such students, popular sentiment favors remediation over talent development. Another problem is that once students are classified as handicapped, they may be taken out of the mainstream of education and placed in special classes or special schools where access to talent development programs are limited. Current research suggests, however, that high ability students with special needs fare better socially, emotionally and academically when attention is given to developing their strengths and interests.

High Hopes, a three year project funded by the U.S. Office of Education through the Javits Grant Program, has been designed to identify and nurture artistic and scientific talent in upper elementary students with learning disabilities, behavior disorders, attention deficits, or hearing impairments. These students come from seven sites in Rhode Island and Connecticut. These sites represent three different learning environments - special schools, special classes within the public school and mainstreamed children.

The objectives of the sessions are to provide an overview of the three year project; to describe the behaviors characterizing talent in science, visual arts and dramatic arts; and to demonstrate identification activities specifically designed to elicit gifted behaviors. Participants will take part in the identification activities in physical science, biology and engineering as well as in both the visual and dramatic arts. Samples of the actual student responses will be shown and the participants will have the opportunity to discuss which responses show talent potential.

To conclude the session, we will discuss the research agenda and design of the project. The major question to be explored is the effect or impact of talent development on students social and academic self-efficacy and on their self-regulation. Sample instruments and identification checklists will be shared as well.

DEVELOPING A TAXONOMY FOR TEACHING ROUTINE AND CREATIVE PROBLEM SOLVING ABILITIES

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This paper extends the author's earlier model of problem-solving strategies to generate a framework that supports teaching both routine (specific) and creative (general) problem-solving abilities to diverse learners. After reviewing an operational definition of problem-solving behavior and describing the various model patterns that can be defined in constructing solutions to problems, a taxonomy of problem-solving behavior consistent with these patterns is developed. This taxonomy is described as a tree, the branches of which contain distinct approaches to problem solving that result from partitions of the universe of all problem-solving behavior.

First, problem-solving behavior is divided into two categories based on whether the solution pattern involves a discontinuity. The second division is based on whether the problem solver's behavior is conscious or unconscious, where conscious simply means that verbal behavior with respect to the problem is collaterally present with attempts to reach a solution.

The classification methodology yields four "fuzzy" approaches to problem solving. Ordered from the specific to the general, these are: habitual or automatic approaches, algorithmic or learned approaches, heuristic or discovered approaches, and transcendent or inspired approaches.

Following detailed descriptions of each of these approaches, together with illustrations drawn from several domains of discourse, the paper concludes with a detailed analysis of the implications of this taxonomy for teaching generalized and specific problem-solving behaviors to diverse groups of learners.

Particular attention is paid to methods for teaching general heuristic approaches, which can then be transformed into the more specific algorithmic approaches to problem solving.

**THE ACCEPTANCE-REJECTION CONFLICT MODEL:
DEVELOPING A THEORETICAL MODEL FOR ANALYZING
UNDERACHIEVEMENT IN TERMS OF THE PEER SOCIETY**

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Students who do not perform to their academic ability level have always been a source of concern, frustration, even anger, for educators and parents. In recent years, efforts have increased to enhance understanding of underachievement and of the forces which impede the realization of potential. This presentation explores peer pressure as a prevailing force affecting achievement, particularly for adolescents, and describes research in progress which has led to the development of a theoretical model for analyzing underachievement in terms of the peer society.

The Acceptance-Rejection Conflict (ARC) Model is based on the assumption that high ability students need to accept and rejoice in their talents while also finding friendship and group acceptance. Preliminary findings of the present study indicate that many high ability adolescents perceive a conflict between these two needs in their educational settings. Academic achievement and group acceptance are frequently viewed as non-compatible. Students in the study have identified five behavioral responses that emerge as a result of the perceived conflict between gift and group: Rejection of the gift, Immersion in the gift, Ambivalence, Alienation toward gift and group, and Acceptance of both gift and group. Acceptance is the positive resolution of the conflict whereby both developmental needs can be met.

The sample in the current study included students (n=130) from medium-sized rural schools and large urban schools. Students ranged in age from 12 to 16. African-American, Hispanic and Anglo students were represented in the sample. Methodology included surveys, structured interviews and case studies extending over a three-year period.

The presentation will describe interventions undertaken by Project STREAM* (Support, Training, and Resources for Educating Able Minorities) to mitigate the effects of negative peer pressure on academic excellence and will encourage dialogue regarding the ARC Model and implications it suggests for gifted and talented programming.

*STREAM was sponsored for three years by a Jacob Javits grant.

ANALYSIS OF PRESERVICE TEACHERS' PERCEPTION OF THE LABEL "GIFTED-TALENTED-CREATIVE"

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Perceptions of the term giftedness, even among school personnel, are too often negative and divisive. This can be a major deterrent to implementation of differentiated programs and learning options for highly able, talented, and creative students.

Are the perceptions of undergraduate majors in education negative toward gifted, talented, creative students? If so, can such views be altered during their academic and field-based experiences in university teacher education programs? Have the perceptions of education majors changed during the past decade, as movements such as gifted program mandation, mainstreaming, cooperative learning, and now inclusion and outcomes-based education are integrated into teacher preparation? If there have been changes, are they for the better, or for worse? Answers to such questions will help influence the development of appropriate learning plans and school environments for gifted, talented, and creative students.

A comparative analysis was made of perceptions by education majors during the early 1980s and during the early 1990s to assess their attitudes toward labels depicting the various exceptionalities regarded as special education categories within those two periods. (Data for only the descriptive phrase gifted-talented-creative will be reported for this presentation.) The students were required to take a course about exceptional children in order to receive endorsement for state certification.

Free-association responses were solicited early in the first class session of the course before any discussion of the syllabus, course requirements, or class content was held. Anonymity was assured and candor of response was encouraged. Interrater reliability was established on the categorization of every contributed term as being "positive," "negative," or "neutral." Grouped responses of students from the early 1980s and from the early 1990s were compared for differences.

Students also were asked to list courses they had completed in psychology or human development. One intriguing area of information resulted from the item inviting participants to describe their own experiences of being labeled exceptional or placed in special education programs.

Many experts in the field of gifted education urge that the strongly negative social implications or ambiguous effects of giftedness on others must be addressed in teacher education programs. Preservice teachers cannot be expected to bring nurturant attitudes toward giftedness, talent, and creativity to their classroom environments and their students learning needs without concerted efforts by those who help them prepare for their future teaching roles. University personnel, educational researchers, and advocates for gifted, talented, and creative individuals must continue to investigate this area of concern and address the improvement of attitudes by aspiring teachers and administrators toward this significant population in schools.

SOCIOCULTURAL VARIATIONS IN COMPETENCE DEVELOPMENT AMONG HIGH SCHOOL STUDENTS EDUCATIONALLY ENRICHED DURING INFANCY

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The proposed paper is designed to report further on an ongoing follow-up study of high school students whose parents guided them with language-oriented enrichment during infancy. Previous papers presented at the Esther Katz Rosen Symposia (1992, 1993) have centered on discussions of the high percentages of giftedness and other high competencies attained in many of the Ss with largely college-educated backgrounds. Only preliminary data on a few students from Afro-Caribbean families with limited education were then available.

Today we shall focus on sociocultural (including gender) and related educational background differences in levels and patterns of competence among subjects, relating these to developmental histories. The aim is to explore just how high competencies established from enrichment during infancy have evolved among the different sociocultural ecologies over the course of later development. How do these different ecologies, varying in family, school and community, foster, channel or impede the development of different forms and levels of competence?

To date, among Ss located from largely college-educated backgrounds 67% of 42 Ss had identifiable gifted status. Among 10 Ss located so far from Afro-Caribbean immigrant families with limited education 8 (80%) were performing excellently in school (2 were gifted or close to gifted), while only 2 (25%) of their 8 located controls were doing well in school (none were gifted). Competence also varied among Ss according to educational background and gender. For example, among white families (plus one Chinese) (N=5), in which both parents had no more than a high school education, 2 Ss (40%) were enrolled in gifted classes, compared to 26 of 40 Ss (65%) of white families (includes one half Japanese) having at least one parent with some college education. Thus among all non college educated families (Black and White), 3 of 15 Ss (20%) entered gifted classes, compared to 65% of Ss from at least partly college educated backgrounds.

These and other group differences in competence, including competence across different domains (reading, creative writing, math, science, the arts, sports and social) will be discussed in the presentation. We shall also attempt to furnish preliminary information on how differences evolved developmentally (including the effects of slight original program differences). We are exploring how the well established early competencies evolved differentially through complex interactions between the children's efforts and the socialization experiences in the different ecologies.

**MEETING THE NEEDS OF GIFTED LEARNERS
IN THE RESTRUCTURED MIDDLE SCHOOL**

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This paper describes the Chapter 2-Carnegie Middle School Project, a three-year plan to develop educational programming that will enable educators to provide appropriate services to advanced and gifted learners within the restructured middle school environment. Because the project has completed only the first year of its intended program, its focus to date has been the provision of professional development for project participants in order to facilitate the development of thematic interdisciplinary curriculum. The implementation of professional development and the issues and lessons encountered in the project's professional development program comprise the primary discussion of this paper.

**GIFTED POTENTIAL IN YOUNG CHILDREN
FROM DIVERSE BACKGROUNDS:
WHAT DOES IT LOOK LIKE?**

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As more and more attention has been drawn to the particularly dismal record of success in identification of giftedness and gifted potential where children from culturally different and economically disadvantaged backgrounds are concerned, it has become quite evident that the identification of exceptional potential in young children must become a better informed process if we are to respond with nurturing and supportive schooling for such children. Toward that end we have conducted studies of exceptional abilities in preschoolers as reflected through their emerging cognitive styles (Haensly, 1992, 1993), as affected by familial context and siblings (Haensly, 1993) and Chinese familial expectations (Bagby & Haensly, 1994), and as expressed through functional behavior in Head Start children (Haensly, Ash & Wehrly, 1992). Recent reports of universal primary identifiers of exceptional potential in young, culturally different and economically disadvantaged children (Shaklee & Rohrer, 1991) as reported by Coleman (1994) provide a promising lead genuinely related to sound, theoretical views of intelligence and cognitive competence.

The purpose of the study of giftedness in young children to be reported here has been to extend our knowledge about the multitude of ways in which emerging giftedness, that is, gifted potential in children from diverse backgrounds may be observed in home and school settings, and in the particular setting of a specialized summer program for bright 3- and 4- year-olds. Additional data is being collected from local pre-K and K classrooms of a public school setting.

The organization of observations of gifted potential in the children in this study has been to focus on a set of general variables that are present in any child's experience: preferences exhibited toward different contents or symbol systems (print, number, musical, geometric, spatial), consistencies in modality of information gathering and in expression of ideas, pace of exploration and response, environmental preferences for play, and type of interactions with adults and peers. Observations include specific descriptions of behaviors, illustrated by examples of the behavior in context.

CASE STUDIES IN DIVERSITY:INDIVIDUAL DIFFERENCES IN ABILITIES AND TRAITS OF YOUNG GIFTED CHILDREN

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The purpose of this study was to describe how the combination of intellect, aptitudes, learning style, motivation, interest, and environment are demonstrated in individual children.

A qualitative case study method was used to describe the differences and similarities in five children, ages five and six, who attend the Ricks Center for Gifted Children. A case study method allowed the in-depth observation and collection of data to provide insights into the individual similarities and differences of these children.

Using Tannenbaum's (1983) psychosocial definition of giftedness as a framework for describing the data, the study demonstrated that general intellectual abilities, specific aptitudes, nonintellective traits, and environmental factors combined in unique ways in each individual student. Only two characteristics were displayed by all five children, a "depth of understanding" and strong memory skills. The children displayed differences in all other areas. They demonstrated differences in their motivation, interest and learning style. Their home environments differed in language, culture, and socio-economic status. They displayed diverse abilities in interpersonal, intrapersonal, linguistic, mathematical, musical, kinesthetic, and artistic abilities (Gardner, 1983).

The educational importance of this study surfaces in its demonstration that each individual gifted child has unique educational needs. In order to fully maximize their abilities, gifted programming should to be individualized to meet the particular needs of each of gifted student. Further studies documenting the ways ability, personality and environmental factors combine in individual children will provide educators with information to help them plan appropriate programming to meet the diverse needs of gifted students.

**MISBELIEFS ABOUT INTELLIGENCE:
A COMPARISON OF PSYCHOLOGISTS', TEACHERS',
SCHOOL ADMINISTRATORS', AND PARENTS' PERCEPTIONS**

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It is widely accepted that measures of intelligence have been misused in many ways. They have been misused in the ways in which they have been administered. They have been misused with regard to whom they have been administered. They have been misused in terms of the interpretations that have been made. Finally, they have been misused when those using the tests have no conceptualization as to the limitations of the tests.

According to the Standard for Educational and Psychological Measurements, the clinician is part of the test, and the expertise of the clinician must be considered when determining the validity of an individually administered measure of intelligence. If clinicians, and for that matter, consumers such as teachers, parents, and school administrators, harbour misbeliefs about the uses of intelligence tests and regularly misapply those systems of misbelief in using IQ test data, then the ecological validity of IQ tests is substantially reduced.

The purpose of this study was to evaluate the perceptions of five groups of individuals who regularly consume the results of IQ tests using a 50-item Likert-type survey. School psychologists and clinical psychologists not only administer IQ tests, but they must also interpret the results for others. Special education teachers are regular consumers of IQ test data in that they use the data to assist in the development of educational programs for children with special learning needs. School administrators are consumers of IQ test data and as supervisors of the professional staff in the schools, may have some influence about how these measures are used. Finally, parents are potentially major consumers of IQ test results when their children are referred for comprehensive evaluations for learning or other psychological problems.

Fifty school psychologists, 50 clinical psychologists, 50 special education teachers, 50 school administrators, and 50 parents of children enrolled in special education were randomly sampled with a fifty-item survey that was developed to evaluate perceptions and misperceptions about the construct of intelligence, who can be administered an intelligence test, how these test results should be interpreted, and what are the limitations of intelligence tests? The return rate for all five groups was well over 90%.

Results of the survey were factor-analyzed and scales were constructed. The survey was shown to be highly reliable using the Cronbach Alpha as a measure of internal consistency. Results are reported for each of the five groups, and comparisons are made across groups with regard to mean factor scores as well as item responses. A discussion will be presented that questions whether these groups can be intelligent consumers of intelligence test information.

NARRATIVE LANGUAGE DIFFERENCES BETWEEN GIFTED/LD AND NONLD/GIFTED ADOLESCENTS

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Few studies have examined the language abilities of gifted children with learning disabilities. The majority of the studies that do exist have concluded that as a group this population possesses superior language abilities (Maker & Udall, 1981; Schiff, Kaufman & Kaufman, 1981; Silverman, 1989; Templin, 1957, 1958; Whitmore, 1985) when the focus of investigation are discrete linguistic forms (e.g. morphemes, lexical items) and/or isolated skills (e.g. grammatic closure, auditory memory). To date, few researchers (Ganschow, 1986; Weeks, 1974) have extended their investigations of language development in the gifted/LD population to include narrative language. The purpose of the present study was to compare the spontaneously generated oral narratives of eighth-grade gifted children with learning disabilities (gifted/LD) to those produced by their gifted peers with no learning deficits (nonLD/gifted).

Twenty, 13-year-old eighth-graders served as subjects in the present investigation. All were identified as gifted by their local school system and were enrolled in the gifted program at the time of their participation in the study. Ten of the subjects met criteria for the gifted/LD group and ten met criteria for the nonLD/gifted group. The Test of Adolescent Language-2 was administered to each subject. Each of the gifted/LD subjects performed within normal limits, with standard scores ranging from a low of 93 to a high of 129 ($M=114.8$). Four of the gifted/LD subjects performed within the Superior category (two were one point from the Very Superior category). Three of the subjects performed within the Above Average category, and four of the subjects performed within the Average category. On the TOAL-2, the nonLD/gifted subjects performed within normal limits, with standard scores ranging from a low of 96 to a high of 124 ($M=111$). Two subjects performed with the Superior range, four within the Above Average range, and four within the Average range.

Each subject spontaneously generated an oral story. The stories produced by the gifted/LD subjects were compared to those of their gifted peers for differences in thirteen dependent measures: story length (number of T-units), episodic integrity (number of complete episodes/incomplete episodes), eight individual story grammar categories (setting, initiating event, internal response state, internal response plan, attempt, direct consequence, reaction/resolution, ending), and sentence complexity (number successful complex sentence attempts/number failed complex sentence attempts).

Differences in the mean number of occurrences of each of the thirteen variables were found. A MANOVA (Wilks' Lambda) revealed a main effect for group [$F=10.29$, $df=13, 6$, $p=.0046$] suggesting that the spontaneously generated oral stories told by the gifted/LD subjects were significantly different from those produced by the nonLD/gifted subjects when compared on the multiple dependent measures at the $p<.05$ level of significance.

The significant finding of this study suggests that the language of gifted/LD children does differ from that of nonLD/gifted peers when narrative language is examined. Results are discussed relative to the limitations of the study and implications for future research. It is hoped that this study will: 1) highlight the heterogeneous make-up of the gifted population, and (2) highlight the need for the involvement of language specialists in the screening and evaluation of children referred for gifted services.

**PERCEIVED COMPETENCE IN STORY AND REPORT WRITING
AS RELATED TO CREATIVE AND INTELLECTUAL ABILITY
IN 4TH GRADE, 8TH GRADE, AND COLLEGE STUDENTS**

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While research has proliferated in recent years in children's perceptions of their own competence in such school-related domains as reading, mathematical, and physical competence (e.g., Eccles, Wigfield, Harold, & Blumenfeld, 1993; Harter, 1982), relatively little attention has been given to self-perceptions of competence in writing.

For the current study, data have been collected on self-perceptions of competence in 4th grade (n=104), 8th grade (n=86), and college level (n=43) students for both report and story writing. In addition, subjects at each age level were asked to write down as many uses as they could think of for a common brick in 5 minutes. This creativity measure can be scored for fluency, flexibility, and originality. Also subjects were all given a verbal measure of general ability.

Data are currently being analyzed and results will be ready for presentation at the Symposium. Studies of writing quality have demonstrated differences in performance as a function of mode of discourse (Engelhard, Gordon, & Gabrielson, 1991). Therefore, we hypothesize that subjects at each grade level will report differences in their perceived competence for the two forms of writing as well. It is expected that perceived competence in report writing will be significantly related to verbal ability scores (which is viewed here as a measure of convergent ability), while self-perceptions of competence in story writing will be related to several creativity scores. Previous research has found that developmental trends in self-perceptions of competence vary depending on subject area and gender. Hence, it is unclear what to expect in the writing area. Results will be discussed in terms of the current literature.

ACTIVE LEARNING: HELPING MEET THE NEEDS OF YOUNG GIFTED CHILDREN

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There are two parts to this presentation: 1) Results of a research study on active learning, and 2) Identification and explanation of active learning strategies that help to meet the cognitive and psychological needs of young gifted children.

Part I

Research posits that workshops are effective in increasing knowledge, skills, and implementation of workshop contents. Additionally, research shows that active learning enhances learning and stimulates higher cognitive thinking levels. However, in the research concerning the length of the workshop, there is some discrepancy. The current investigation sought to discover if short-term workshops in interdisciplinary active learning would increase knowledge, skills, and classroom implementation of those methods.

Nineteen elementary teachers participated in short-term workshops on interdisciplinary active learning and were matched with a similar control group. Analyses of the data revealed significant ($p < 0.05$) differences between the treatment group and control group regarding perceived knowledge and skills with mixed results on implementation. Pretest and posttest scores for the experimental group revealed significantly ($p < 0.05$) higher levels of perceived knowledge, skills, and implementation. The results support the hypothesis that the short-term workshops had a positive effect.

Part II

This portion of the presentation will identify and explain a variety of active learning strategies that help young children learn about topics of interest to them, develop fine motor skills, and help them learn the connection between effort and outcome.

FACTORS AFFECTING THE LIFESPAN ACHIEVEMENT OF GIFTED WOMEN OF COLOR

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This paper reports preliminary findings of a study designed to investigate factors affecting the lifespan achievement of gifted women of color. Participants were sixty African-American, Asian-American, Hispanic, and white women from twenty states nominated as gifted by professional and ethnic organizations. The method for investigation was a retrospective analysis of factors affecting achievement based on interviews with the women and their parents (or other relative) following Bloom's (1985) model. Trained interviewers matched by ethnicity conducted face-to-face interviews with participants and telephone interviews with parents. All interviews were tape recorded and transcribed. Participants also completed the Alpha Biographical Inventory (with instructions modified for age factor). Interview questions addressed the types of hardships and supporting factors encountered by these women over the lifespan; their characteristics during childhood, adolescence, and adulthood; the role of home, school, and community in providing guidance; the role of cultural expectations; and the impact of national policies in their development. The first set of content analyses of participant interviews focused on perceived obstacles encountered over the lifespan and on coping strategies. Results indicated differences between groups and across stages of life. However, structural factors (racism and/or sexism) constituted the most frequently named obstacle in adulthood for all four groups. Participants employed a variety of highly positive strategies for overcoming barriers. A synthesis of socialization and structural models of status attainment is suggested as the most appropriate approach to understanding the achievement of gifted women of color. Future analyses will focus on perceived supporting factors; early characteristics as recalled by participants and parents; and schooling experiences (e.g., formal and informal identification as gifted). The data provide a rich source for exploring additional questions and patterns, including participants' early characteristics with regard to general vs. specific abilities and the factors that contributed to career choice.

ENHANCING GENDERED INTERPERSONAL ABILITIES THROUGH DRAMA AND THEATRE

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A review of selected studies in cognitive, affective, social, and moral development reveals socially constructed gender differences in children's interpersonal, empathic abilities to think, feel, and act from within another person's moral perspective in subjective relation to self given any situational conflict. These specific, interdependent abilities constitute the knowledge and behaviors of pretend play, classroom drama, and acting in theatre. However, drama studies indicate a U-shaped curve of development in acting skills because, in self-conscious attempts to hide authentic identities, elementary-age children objectify characters like separated spectators rather than play characters as themselves like subjective actors in situations. An holistic approach to teaching drama offers a means of testing these theories to balance gender differences from care and justice orientations. When integrated into elementary school curricula, drama may enhance the interpersonal abilities of all children in this context and in future stages of their lives.

**PROBLEM SOLVING IN MULTIPLE INTELLIGENCES:
A REPORT OF OBSERVATIONS OF
NATIVE AMERICAN AND HISPANIC CHILDREN**

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Using Howard Gardner's (1983) Theory of Multiple Intelligences (MI) as a framework, the authors have conducted cross-cultural observations of children as they solve problems ranging from well-structured to unstructured. Using high-interest manipulatives in a relaxed, familiar atmosphere, observers and classroom teachers cooperate to provide a situation in which students display their abilities in spatial, logical-mathematical, linguistic, interpersonal, and intrapersonal intelligences (Maker, 1992). These observations have revealed certain behaviors specific to the tasks and intelligences as well as a set of behaviors that can be observed across intelligences and tasks. Similar behaviors have been observed across linguistic groups (Arabic, English, Navajo, Spanish) across cultures (Navajo, Mexican American, Tohono O'Odham, African American, Anglo-American, Australian) and across economic groups.

In most of the studies, qualitative research designs have been employed, including direct observations in classroom settings, videotape analysis, and wholistic scoring of student portfolios. In many of the studies, qualitative approaches are combined with statistical analysis of experimental and comparison group scores on standardized tests of ability and achievement.

Although data are available from varied ethnic, cultural and linguistic groups, the most extensive studies have been conducted with Navajo and Mexican American children. Summaries of the methods and results of these studies will be presented: (a) general and specific problem solving behaviors observed, (b) changes in problem solving behaviors from grade 1 to grade 4 in Navajo children, (c) reliability of the observation process and behavior checklist, (d) validity of the observation process and behavior checklist (e) linguistic expressiveness (oral and written storytelling) of Navajo children taught in bilingual and monolingual classrooms, and (f) comparisons of characteristics of students identified through observation of problem solving and those identified by traditional intelligence tests. Work in progress and future directions will be described.

**DIVERSITY, DOMAINS, AND DEVELOPMENT:
IMPLICATIONS FOR GIFTED ASSESSMENT AND PROGRAMMING**

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In a longitudinal study of gifted early adolescents, results are supporting domain-specificity as a useful perspective on high level development. Coherent achievement patterns have been identified, such that students who do poorly or well on one measure in a domain tend to perform similarly on other measures in that domain, with psychological self-report data showing consistency with achievement domain patterns. If there are a variety of pathways to the development of competence, as these findings suggest, then they imply different identification approaches, and different educational strategies. Various approaches to assessment and programming will be discussed in each of the three domains under consideration (Linguistic, Logical-Mathematical, and Social), emphasizing the need to offer a range of options from which gifted students can select -- with guidance -- the most appropriate. Some case studies of Board-wide implementations of identification and programming policies will be described as illustrations of the ideas under discussion.

**KEEPING GIFTED GIRLS IN THE GAME:
A DATA-BASED ARGUMENT FOR AN EDUCATIONAL RESPONSE TO
ADVANCED DEVELOPMENT IN THE SOCIAL DOMAIN**

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Domain-specific sex differences were found in a study of developmental diversity in gifted early adolescents. Boys were more likely than girls to achieve and express interest in solely academic areas, particularly mathematics, and they were far less likely than girls to be high achievers and express interest in solely social areas. One response to these findings is to educationally recognize the social domain as an important vehicle of intellectual development, and to offer a coherent and rigorous course of study in Human Development, starting at early adolescence. While girls must be encouraged to succeed at counter-stereotypical pursuits, it may also be useful to respond to observed interest patterns. It is argued that such an approach would not only work to keep gifted girls intellectually engaged in school through the problematic early adolescence period, but would also have important societal benefits, and is consistent with domain-specific models of intelligence.

**WORK IN PROGRESS: THE PARSONAGE CHILDREN:
AN ANALYSIS OF THE EARLY YEARS OF
THE BRONTES AT HAWORTH**

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Presently, I am in the process of revising a work in progress on the formative years of the Bronte siblings - mainly Charlotte, Branwell, Emily, and Anne at Haworth in England in the early part of the nineteenth century. It is my belief that by examining the early years of eminent individuals, we will be better able to analyze those qualities, behaviors, and events that describe the phenomenon we call giftedness. In the case of the Bronte siblings, one is able to study a family of genius and to reflect on the role of parents, early interests and collections, peer groups, and home environments in the nourishment and sustaining of gifts and talents. This paper intends to focus on the writings of the young Brontes, especially their "little books" and the "kingdoms" that they developed over a significant number of years to demonstrate how their early writings contributed to their adult productivity. It started one night in 1825 when Mr. Bronte brought home a box of wooden toy soldiers for Branwell. All the children were fascinated by them, and soon "The Twelves," as they were called, became characters in the tales of wars and battles.

The dilemma of my work often lies in its methodology which falls between literary analysis, biography, historical analysis, and education. This paper is a continuation in a series of case studies about exceptionality and talent development. The first case centered on a study of Darwin and his teacher/mentor, Professor John Henslow (McGreevy, 1990); the second was a study of the early years of Charles Dodgson (Lewis Carroll) (McGreevy, 1992). Recently, I have submitted a paper, "Childhoods of Promise," on the early lives of writers Lewis Carroll, Beatrix Potter, Agatha Christie, and Dylan Thomas to Gifted Education International. Hopefully this close examination of early lives of eminent individuals will provide examples of "gifted behaviors" as educators search for better ways to identify and nurture talents - particularly emerging writers.

CREATIVITY AND RACE

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In the process of conducting a case study of the creativity of the composer, Arthur Cunningham, it became apparent that race was an important issue. As a person whose background includes African-American, Caucasian and Native-American ancestors and whose life has been lived in a time of racial unrest, his color has been a significant factor in his creativity.

Early education focussed on classical music; jazz was added later. Gospel music was heard regularly in church. His schooling was carried out, at different times, either in dominantly white, black or racially mixed situations. His significant mentors were both Caucasian and African-American and his music reflected both influences. As he matured, incidences of racial hostility effected his compositions causing him to alternately embrace and reject his African-American heritage.

Although this is a single case study, racism is a reality in our society and is likely to be a factor in the creative thinking and products of other gifted individuals.

**DIFFERENCES BETWEEN GIFTED TEACHERS',
REGULAR CLASSROOM TEACHERS' AND UNDERGRADUATE EDUCATION
MAJORS' EXPRESSED VALUE OF EMPOWERED BEHAVIOR
FOR GIFTED CHILDREN AND CHILDREN IN GENERAL**

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According to Ashcroft (1987), "To empower is to bring into a state of ability/capacity to act. It is by definition a process and not a product" (p.142). Since empowerment is an on-going process, there can exist interim degrees of empowerment. There needs to be congruency and mutual reinforcement if the belief and action are to be sustained. Otherwise, the person would not continue to believe in his or her capability and would not act in an empowered manner (Ashcroft, 1987).

This study investigated if significant differences existed between gifted teachers', regular classroom teachers', and undergraduate education majors' stated (or expressed) value of students' empowered behavior for gifted children and children in general. It also investigated the relationship between the rankings of items of their expressed value of empowered behaviors.

The sample for this study consisted of three groups of teachers: teachers of the gifted, regular classroom teachers, and undergraduate education majors. Three hundred surveys were distributed to students enrolled at four different universities within the state of Kansas. The sample size consisted of 162 teachers. Fifty-six gifted teachers forty-three regular classroom teachers, and 73 undergraduate education majors.

The Student Behavior Scale and Gifted Student Behavior Scale were the instruments employed. Items were selected from the Ideal Child Checklist developed by Paul E. Torrance and items selected from research literature relative to empowerment. The final scale consisted of 66 items. Teachers were requested to respond to the survey using a Likert scale of 1-5 to rate the degree to which they encourage or discourage certain behaviors in children they teach.

Analyses of the responses were conducted using means, standard deviations, univariate F test, post-hoc Tukey test, and Spearman-Rho correlations. Univariate tests were used to identify significant differences on the six dependent variables. Significant differences were reported on empowered behaviors for children in general among the teacher groups. Gifted teachers had a higher mean on empowered behaviors for children in general and gifted children. Post-hoc Tukey tests revealed that significant differences occurred between gifted teachers and regular classroom teachers, and between gifted teachers and undergraduate education majors. Spearman-Rho correlations that represented teachers' groups with each of the dependent variables revealed high to moderate correlations for all teachers' groups.

Ranking of items on empowered behavior for children in general indicated gifted teachers and regular classroom teachers ranked the trait, sees oneself as a capable individual highest. This particular trait was ranked sixth by undergraduate education majors.

Recommended for future research: 1. The effect of teacher empowerment as a factor influencing the empowerment of students. 2. Investigate attribution theory as a useful variable in strengthening empowered behavior in students. 3. Compare empowerment between gifted females and gifted males 4. Underachieving gifted students and their relation to empowerment. 5. Investigate teachers' encouragement of empowered behaviors in students entering a gifted education graduate program and upon completion of such program. 6. Family empowerment and its relation to student empowerment.

WHO SHALL BE GIFTED: BACKROOM DECISION-MAKING IN GIFTED EDUCATION

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This study examines how classroom teachers' conceptualizations of "giftedness" unwittingly affect the selection of minority children for gifted programs. Middle-school classroom teachers, all of them mainstream Caucasian, in a Midwestern community with a sizable minority population, were asked to recommend students for additional gifted programming. The teachers met with the principal researcher during their planning periods and were encouraged to discuss their recommendations with each other in her presence. Later, similar discussions were generated at a downtown multicultural center in order to determine if there were cultural differences in conceptualizations of "giftedness," if any differences reflected differing values-orientations, and if such values-orientations affected mainstream teachers' referrals. All dialogue was recorded and examined to determine how values-orientations, conceptions of race, ethnicity, and social class, and ad-hoc rule-making affect formulations of "giftedness," and how these conceptualizations affect teachers' recommendations for gifted programs.

The main finding was that the language in the teachers' discussions reflected mainstream values. Emphasis on self-presentation, social skills, verbal assertiveness, arts-as-achievement, school activities as "community involvement," and other areas of individual conspicuous achievement contrasted with Latino emphases on family and community, humility, inconspicuous success, networking and sharing, and arts-as-expression. Over 40 different "definitions" of *giftedness* were confidently expressed by the teachers. Most of these conceptualizations could preclude the selection of minority children.

These results argue that more is needed to insure proportionate representation of various cultural groups than culture-fair assessments, explicit criteria, and stated philosophies of inclusion. Classroom teachers are key players in the referral process. Staff development in regard to gifted education, often neglected, is crucial, both for clarifying district definitions and criteria and for raising awareness about differing value systems. In addition, understanding of culture-specific views of "giftedness" might both enhance the selection process and become an important vehicle for promoting tolerance and appreciation for diversity generally.

HITTING HIGH C: HOW TALENTED TEENAGE MUSICIANS DEVELOP CAREERS

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This research examines the career development of teenage musicians. Qualitative observations and interviews are combined with quantitative analysis to aid in understanding the social context of development and the quality of experience of young musicians. Qualitative analysis includes observations of teenagers at "gigs" and interviews with teachers, mentors, and age mate musicians. Quantitative variables examined include general career knowledge, data concerning time spent per week in music-related activities, and self-reported moods while engaged in a week[s] activities, ranging from schoolwork, to time spent with parents, to time spent on music making. Aspiring student musicians are compared to a national sample of adolescents.

Data from the five year Study of Career Formation, funded by the Alfred P. Sloan Foundation and conducted at the National Opinion Research Center (NORC) and the University of Chicago. The sample consists of 1,202 adolescents from 33 public schools around the United States. Subjects were selected from urban, suburban, and rural schools and were selected with approximately equal representation across gender and ethnic lines, as well as academic track. Measures included items from the National Educational Study questionnaire (NELS: 88), the Career Orientation Scale (COS), and the Experience Sampling Method (ESM). The ESM, developed by M. Csikszentmihalyi, is a week-long process that requires students to fill out brief questionnaires about their daily experiences in response to a specially programmed wristwatch which sounds at randomized times during the day.

Preliminary analysis of data from the pilot year of the study suggests that while close to 6% of students asked aspired to be musicians, only about 1% reported that they actually thought they would do this type of work as adults. Interview data and preliminary analysis suggests that while the immediate experience of music-making is highly enjoyable and motivating, perceived long-term life chances in the field are lower and thus commitment and motivation to the domain of music is much lower as well.

A STUDY OF YOUNG ARTISTS: THE DEVELOPMENT OF ARTISTIC TALENT AND CREATIVITY

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An understanding of the complex nature and development of artistic talent in children necessitates an investigation of the development of universal cognitive processes as well as development in the nonuniversal domain of art. Studies of adult manifestations of creativity offer us insight into problem situations and variables that differentiate critically acclaimed professional producers from professionally competent individuals. However, a more complete understanding of artistic production as a developmental process requires investigations of changes associated with the development of expertise, developmental changes found in domain-specific performance in a variety of problem situations, and changes in the way visual information is represented.

An on-going study of 60 students (kindergarten through 5th grade) enrolled in a private after-school art program provides an opportunity for the investigation of the processes and products of children who have chosen to participate in an art-enrichment program for a number of years. The nature of the investigation and the intimate relationship between the experimenter/artist/teacher and the children offers an opportunity to explore the development of expertise and emotional commitment to the visual arts in a population of highly motivated and highly reinforced children. The children were videotaped while they created solutions to artistic and puzzle-like activities varying in the degree to which the problems, methods, and solutions had to be formulated by them. In addition, they were asked to physically group a variety of objects in a task that involves the categorization and description of visually-presented information.

In addition to the process variables derived from drawings, puzzle activities, and the categorization task, the subjects' drawings and two samples of long-term painting projects were evaluated by three professional artists. The relationship between the process variables and the evaluations of the drawings and paintings is discussed as well as the differences among the works produced in different problem situations. The current findings are discussed with respect to the research involving children's development in the production and perception of art, the evaluation of children's artistic creations based on adult conceptions and manifestations of creativity, the concept of a developmental model of the creative process, and the implications for the expression of and sensitivity to racial diversity.

**RESEARCH IN PROGRESS: SOCIETAL COMPETENCE:
THE RELATIONSHIP OF PARENTAL EXPECTATION
TO INDIVIDUAL POTENTIAL**

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Societal competence is a set of variables or general abilities expected to be present and observable among older adolescents and adults. An expectation often becomes reality and often also becomes non-reality because competencies are learned behaviors. When the formative developmental stages occur within a nurturing and enriched milieu, the capacities for societal competence are learned and emerge as prosocial behaviors. In emotionally and culturally deprived environments, all such capacities either diminish or divert to negative behavioral outcomes.

I posit that societally competent behaviors include the variables frequently categorized as traits of leadership and that these traits emanate as outcomes of the quality of the earlier parent-child relationships (Summers, 1990). Whenever children experience lovingness, acceptance, exposure to new opportunities and information, and can learn instrumentally in accordance with their preferred modalities, they become mature, reliable, independent and competent achievers (Baumrind, 1989 & 1973). The observable leadership/competence traits include creativity, higher mental and physical levels of energy, productiveness, psychological confidence, and a sense of vision (Campbell, 1985; Kaplan, 1990). Leadership traits often are observable among the personalities of gifted individuals (MacKinnon, 1978).

For a research study of societal competence currently in progress, I am collecting data from 1000 subjects who are either Freshman or Senior students matriculated at five universities in the southern largely rural state of South Carolina. The pool composite reflects private, public, and historically black enrollments. This research examines the impact of the students' perceptions of their relationships with their parents during childhood to their perceived leadership and competence traits. The similarities and differences between Anglo and African and between rural and non-rural will be analyzed.

If this investigation finds that high quality parenting elicits high quality offspring behaviors of leadership, a future task for the behavioral sciences reigns clear.

**ASSESSMENT OF TWO APPROACHES TO TEACHING WRITING
IN A TALENT DEVELOPMENT MAGNET SCHOOL (GRADE 5)**

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Two approaches to the teaching of writing to fifth graders in an inner-city talent development school (grade 5) were tested. One approach ($N = 26$) was deductive in nature and used teaching methods common in inner-city schools. The other approach ($N = 26$) was inductive and designed to meet the hypothesized shortcomings of inner-city instruction. In the deductive approach the materials were contextualized and created by the students while the teaching methods emphasized scaffolding and mediation. It was hypothesized that the inductive approach would improve student writing abilities and attitudes toward language art and increase their feelings of psychological safety in the classroom. The results indicate that the specific changes in the pedagogy used in the inductive approach to writing instruction result in positive influences on student writing abilities ($p < .05$), affect ($p < .05$).

DEVELOPING HIGH-LEVEL HUMAN POTENTIAL IN A DEMOCRATIC SOUTH AFRICA

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After a history of political and social segregation, South Africa became a democracy on 27 April, 1994. The previous dispensation enforced segregated education. While a white government was in power the white minority enjoyed and still enjoys education of a high standard. The majority of the population, however, receives schooling at a level which can at best be described as very poor.

With the dawn of the new democracy the daunting challenge of rebuilding a fragmented society became a first priority. Education is seen as one of the most important vehicles to bring about this reconstruction. The question in terms of developing high-level human potential is: Is there any room for providing special education for gifted pupils in a country where only 65.7% of the children of school-going age attend school? It is argued in this paper that it is imperative to provide such education in order for the democracy to succeed.

A further and most difficult problem to be addressed consequently is of course: How can special provision be made for the optimal development of high-ability pupils in a country with huge educational backlogs and limited resources? An answer to this question is suggested by describing an organizational structure on the macro-level of educational planning and a short exposition of teaching-learning strategies which are employed at present on a small scale and which can be seen as the beginning and part of a practical solution to a complex problem.

HOW SIBLINGS HELP EACH OTHER: AN IMPORTANT ASPECT OF CREATIVE DEVELOPMENT

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This paper interrelates two topics which have largely been considered separately in the psychological literature: the development of creative work and sibling relationships.

Investigations of sibling relationships, until ten years ago hardly existed. Since then, many have focussed primarily on negative aspects, especially rivalry and competition. Swept up by the legacy of psychoanalytic theory, they have sought to study the pathology of sibling relationships and its effects. Meanwhile creative work has been conceived primarily as individualistic and solitary.

My work-in-progress follows the case study method described in Wallace & Gruber (1989). It is a largely historical study of the supportive and sometimes collaborative roles of siblings in the creative work of one or both of them. There is great diversity in the roles that siblings take. It may be as teacher: Bertrand Russell's older brother taught him geometry and had a formative influence on Russell at one period of his early life. It may be as intellectual, emotional, and instrumental support: Theo van Gogh was his brother Vincent's introduction to the art world of Paris, the person to whom Vincent poured out his ideas and purposes in their famous correspondence, and the brother whom he could count on to give him financial support from time to time. Or it may be as full-fledged long-term collaborator, as was the case with the brothers Grimm and the Wright brothers, among others.

Some recent studies of the development of giftedness, such as Feldman's, have emphasized the supportive role of parents and others in the young person's life. But sibling relationships have been neglected. Moreover, sibling studies are important as a special case of peer relations.

My paper will focus on the impact of early experience and family constellation and circumstances on the creative work of two sets of writers: William and Dorothy Wordsworth, and the Brontes. The Wordsworths suffered a prolonged enforced separation as children which drew them into an intensely close relationship in their adulthood. They became collaborators in running their household and in William Wordsworth's writing, often based on material culled from Dorothy Wordsworth's journals. The Brontes, in contrast, were four children (3 girls and a boy), isolated together in the English countryside, a circumstance that played an important role in their extraordinary, prolonged (preadolescent and adolescent) collaboration in writing about and illustrating an extremely elaborate make-believe world.

In future research, an important focus should be the different forms that collaboration can take, and their consequences.

ELICITING GIFTED BEHAVIOR THROUGH WORK WITH COMMUNITY MENTORS

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Thirty eighth grade African American students, in preparation for entering high school, participate in an intensive three week summer session in the application of discrete mathematics to community problems.

Primary instructors are themselves African Americans from education and industry. Eight students from the previous year return as assistants and tutors. Working in teams, participants are introduced to math, communications and problem solving, then apply these skills to case studies of real problems. Instruction is supplemented by visits to community sites where these math concepts are applied: neonatal intensive care facility (criteria and weighting protocols for assigning infants to life support systems), school district transportation facility (bus routing problems), banks and grocery stores (queuing management strategies).

High expectations from staff and community mentors result in positive experiences for all participants, but some of the students shine under these circumstances, understanding the mathematics, assuming leadership roles within the teams, and serving as presenters at the final symposium for parents and friends. These students are invited back as assistants and some serve in this capacity for two or three years, though there are many other opportunities that now become available to them.

Though most participants entered the program working at grade level, none would be considered gifted within their classrooms. Their summer experiences, which require the development of new math, problem solving and communication skills, and involve close working relationships with slightly older students and with adult role models, elicit a very high level of achievement and engagement with some students. We hope to track the performance of these students through high school and beyond. We already have indication that academic and career aspirations are much higher and more specific than prior to the Summer institute.

RESILIENCE AND COMPETENCE IN AN ETHNICALLY DIVERSE SAMPLE OF HIGH-ACHIEVING EARLY ADOLESCENTS

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Two independent samples of high-achieving seventh graders and their parents completed questionnaires assessing the student's exposure to severe stress (e.g., death of a parent), academic competence, self-concept, use of time, and eventual academic expectations, as well as levels of parental socioeconomic status (SES) and involvement with the student. In 1992, 626 African Americans, 687 Caucasians, 473 Hispanics, and 458 Asian/Oriental/Pacific Islanders completed questionnaires; in 1993, 331 African Americans, 926 Caucasians, 340 Hispanics, and 356 Asian/Oriental/Pacific Islanders completed questionnaires. Approximately 50% of each group was female. Using factor analysis and hierarchical multiple regression, models predicting self-concept and academic competence were developed. We tested Garmezy and colleagues' compensatory (linear), immunity-vulnerability (interactive) and challenge (quadratic) models of resilience, and sought to replicate our findings from the 1992 sample with the 1993 sample. Consistent results in both samples support the compensatory but not the immunity-vulnerability or challenge models of resilience. Parental involvement in school related activities showed a robust relation to self-concept, while self-concept in turn was strongly related to academic performance. We found no evidence of ethnic-specific relationships predictive of either self-concept or academic competence, although ethnicity did make small but significant contributions to models of academic competence after controlling for SES. Related measurement issues and directions for future research are discussed.

**DEVELOPMENT OF ACCEPTANCE OF PSYCHOSOCIAL DIVERSITY:
IS IT RELATED TO INTELLECTUAL GIFTEDNESS
AND/OR TO AGE-EXPERIENCE?**

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What allows a person to develop cognitive acceptance of diverse psychological, social, and cultural qualities of others? William Perry (1970) has theorized and empirically supported that continual exposure to varying people and ideas brings about a crisis of relativism which, when resolved, results in intellectual growth and a widened perspective. Two research questions are addressed here: (1) Perry showed advanced intellectual development to be associated with more liberal reasoning. Are the cognitively gifted (i.e., the intellectually advanced) generally more accepting of sociopsychological diversity? and (2) Perry's college-aged subjects developed intellectually with age and experience. Are older adults specifically more respectful of various philosophies, values, and personal systems of behavior?

Demographic information, vocabulary knowledge, and Piagetian cognitive stage of 88 people ranging in age from 12 through 82 years old have been gathered. Responses to two sentence stems ("People who differ from me..."; "Foreign cultures...") were coded for Perryan intellectual position as acceptance level of psychosocial diversity. ² analyses compared age/experience groups (e.g., teens/students to elderly/retired) and compared cognitive development (e.g., gifted/advanced to nongifted/normative) for acceptance of diversity. No significant gender differences were found in either cognitive development or tolerance. Nevertheless, as predicted, older and more experienced subjects, as well as gifted subjects of all ages, scored higher on Perryan levels of acceptance of diversity. Thus, (1) age/experience and (2) advanced intellectual ability were found here to be involved in greater tolerance of sociopsychological diversity.

Moreover, additional intriguing results appeared when data were compared on three levels of intellectual ability: the lowest and highest levels were not significantly different from each other, and each was different from the midrange on acceptance of diversity. These findings indicate that those of exceptional ability on either end of the continuum are exceptional at tolerating psychosocial differences among people. This suggests that it is not high cognitive ability that determines tolerance, but, possibly it is the experience of being different (either high or low cognitively) that allows people to accept psychological differences.

With increases in both (1) longevity, resulting in further distinctiveness of the individual, and (2) mobility, bringing contact with myriads of people, opportunities for accepting diversity grow. However, knowing what psychological factors contribute to an acceptance of diversity is not just an opportunity for growth. For our survival, acceptance of differences is quickly becoming a double necessity. Opening up to human diversity leads us to creativity and saves us from stagnation. Tolerance both (1) keeps the way open for vital connections allowing us to interact with our global-village neighbors and (2) saves us from isolation. Perhaps learning how to accept diversity will help us go beyond surviving--into thriving.